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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/617,978

07/11/2003

Rafael Herrmann

035718/260673

4095

29122

7590

08/15/2006

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EXAMINER

KUBELIK, ANNE R

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/617,978

Applicant(s)

HERRMANN ET AL.

Examiner

Anne R. Kubelik

Art Unit

1638

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 25 July 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): 112, 2nd.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

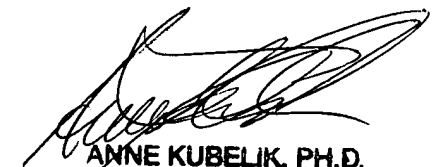
**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

Continuation of 11. does NOT place the application in condition for allowance because:

112, 1<sup>st</sup>, written description: Applicant urges that the knowledge of one of skill in the art would allow one to envision the claimed invention. This is not found persuasive because envisions nucleic acids with 95% identity to SEQ ID NO:14 or 17 is difference from envisioning nucleic acids with 95% identity to SEQ ID NO:14 and 17 that also encode functional proteins. Applicant urges the claims meet the written description guidelines because they recite a functional limitation and 95% identity. This is not found persuasive because example 14 of the Written description guidelines is drawn to a protein with 9%% identity to another protein, not to a nucleic acid with 95% identity to another nucleic acid. Nucleic acids with 95% identity to the recited bases of SEQ ID NO:14 and 17 encompasses those that encode proteins with 8 amino acid substitutions relative to SEQ ID NO:20, while proteins with 95% identity to SEQ ID NO:20 have only 2 amino acid substitutions relative to SEQ ID NO:20. This is a 400% difference. Applicant does not describe such proteins or nucleic acids.

112, 1<sup>st</sup>, enablement: Applicant urges that because examiner acknowledged that the specification teaches isolation of proteins from arthropod venom, pest assays, and plant transformation, the claims are enabled. This is not found persuasive because none of these teach how to make the claimed nucleic acids within the full scope of the claims. Applicant urges the claims specify that the nucleic acids encode functional pesticides and teaches assays and cites references for alterations in proteins - making conservative substitutions is preferable. This is not found persuasive because making conservative substitutions in proteins is unpredictable, as shown by Hill and Lazar. Applicant urges the analysis for the number of variants is improper because they do not correspond to the claims. This is not found persuasive because the lack of guidance for making amino acid substitutions in the claimed proteins; Guo et al also teaches that making numerous amino acid substitutions, as encompassed by the claims will inactivate the protein. Because the specification does not teach what substitutions to make, and because making conservative substitutions is unpredictable, one of skill in the art would need to make substitutions by trial and error; thus, the analysis of the number of possible variants holds. Applicant urges that Lazar and Hill are mischaracterized because the proteins are different and because amino acids that were conserved across many similar proteins were modified. This is not found persuasive. One of skill in the art would expect that amino acids that were conserved across many similar proteins could either not be modified or could only be substituted with conserved amino acids. However, both Hill and Lazar showed this was not the case - highly conserved amino acids could be replaced with nonconserved amino acids, but not with conserved ones. Making amino acids substitutions is very unpredictable, and in the instant case, there is no closely related protein family for comparison. Applicant urges Lazar and Hill teach that it is within the skill of one in the art to make modifications - -only two steps are needed, making the modification and testing it. This is not found persuasive because adequate guidance as to which modifications to make is required, in order to avoid trial and error experimentation. Such guidance is not provided.



**ANNE KUBELIK, PH.D.**  
**PRIMARY EXAMINER**